

cases normal adults emerged from the pupae at the expected time. Considering these observations, and the apparent lack of any innervation in the gold spots, it would appear that the gold spots do not function as light receptors playing a role in the timing of adult emergence. It is difficult to believe that the spots are functionless or purely ornamental, and it is suggested that they possibly function in warning coloration, though this is a debatable point.

LITERATURE CITED

- ANDERSON, T. F., and A. G. RICHARDS. 1942. An electron microscope study of some structural colors in insects. *J. Appl. Physics* 13: 748-758.
- RICHARDS, A. G. 1951. *The Integument of Arthropods*. University of Minnesota Press, Minneapolis. 411 pp.
- URQUHART, F. A. 1960. *The Monarch Butterfly*. University of Toronto Press, Ontario. 361 pp.

A New Species of Mallophaga from the Mikado Pheasant

By K. C. EMERSON, Stillwater, Oklahoma and C. J. STOJANOVICH, Communicable Disease Center, Atlanta, Georgia

A collection of Mallophaga taken on Formosa, by personnel of the Parasitology Department of the U. S. Naval Medical Research Unit No. 2, Taipei, Taiwan (Formosa), under the direction of Dr. Robert E. Kuntz, Captain, MSC, USN, during the period 1957-1962,* included specimens representing a new species. That species is herewith described and illustrated.

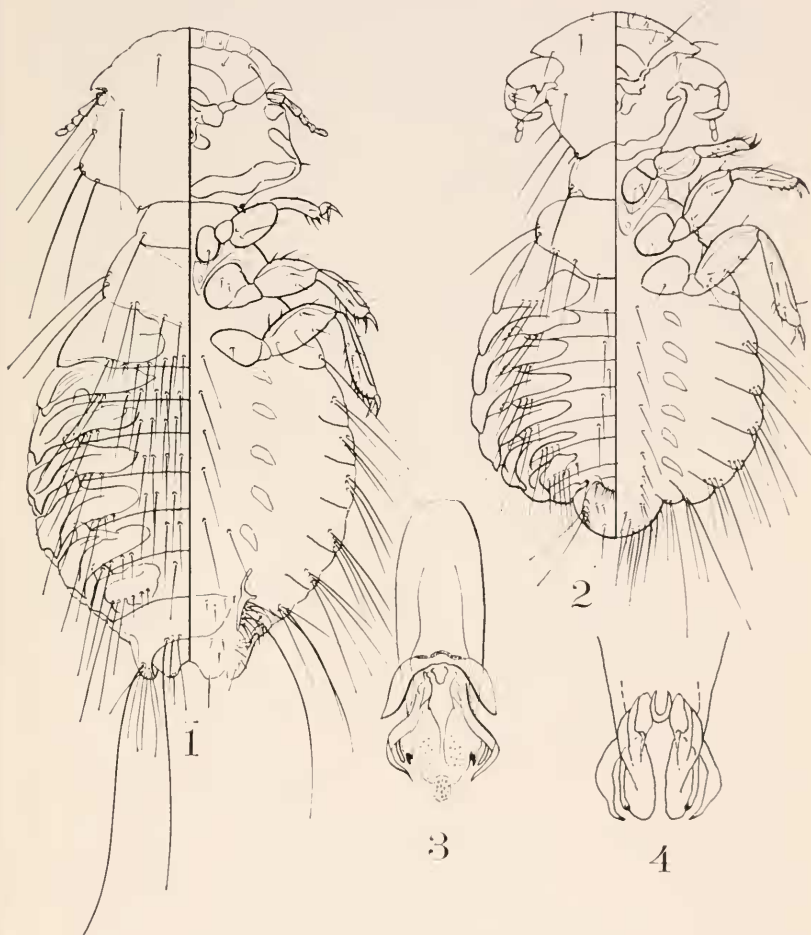
Goniodes sinensis, new species

Holotype male. External morphology and chaetotaxy as shown in Fig. 2. Genitalia as shown in Fig. 3. Total length, 2.76 mm.

* This work was supported in part by funding under Public Law 480, Section 104(c).

Allotype female. External morphology and chaetotaxy as shown in Fig. 1. Total length, 3.49 mm.

Discussion. This species belongs in "Species Group J" as defined by Clay, and is closest to *G. humiae* Clay, 1940. Minor



FIGS. 1-3. *Goniodes sinensis*, new species. 1. Dorsal-ventral view of female. 2. Dorsal-ventral view of male. 3. Male genitalia.
FIG. 4. *Goniodes humiae* Clay, 1940. Male genitalia.

differences in chaetotaxy between the two species is not significant except for that on the terminal abdominal segment of the female. The vulva, in both species, has concentrations of medium-length setae on the lateral margins. Posterior to the lateral margins of the vulva are small patches of setae; which are small and medium-length setae and dense in *G. humiae*, while in *G. sinensis* they are small setae and not numerous. Major differences in the males of the two species are contained in the genitalia, which may be seen by comparing Figs. 3 and 4.

The male of *G. sinensis* is only slightly larger than for *G. humiae*; however, the female is considerably larger. Total lengths for females of *G. humiae*, given by Clay, are 2.84 to 3.18 mm.

Type host: *Syrmaticus mikado* (Ogilvie-Grant).

Type material: Holotype male, allotype female and twenty-two paratypes collected on 1 February 1962; thirty-eight paratypes collected on 31 October 1961; and twenty-six collected on 16 February 1962 off the type host on FORMOSA. Holotype, allotype and paratypes have been deposited in the U. S. National Museum, and paratypes have been distributed to other major Mallophaga Collections.

REFERENCE

- CLAY, T. 1940. Genera and species of Mallophaga occurring on Gallinaceous hosts—Part II. *Goniodes*. Proc. Zool. Soc. London, Series B, 110: 1-120.